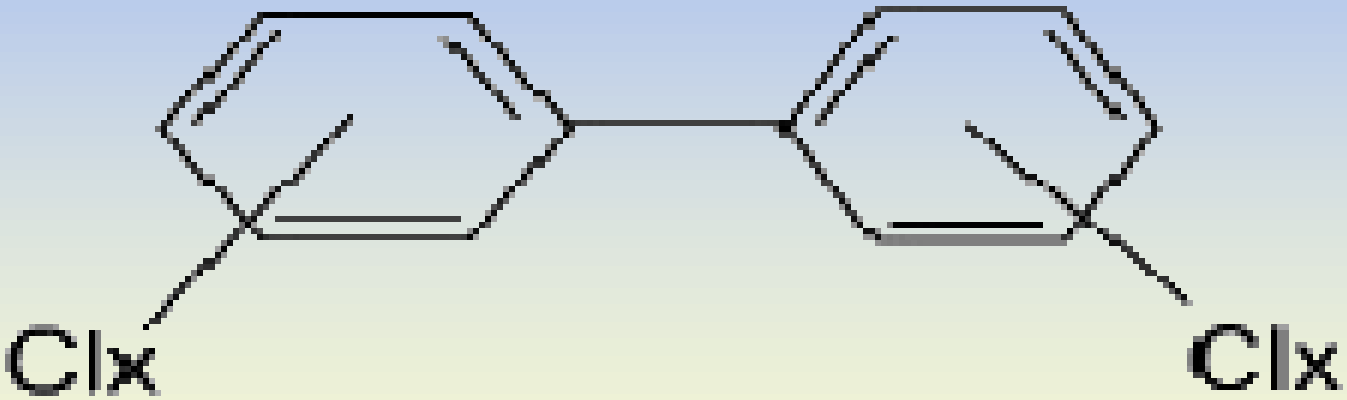
PCB Point Source Monitoring Guidance Document



VADEQ

January 8, 2008

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Overview

- Objective
- Review
  - Response to Comments from June 11th
  - Conference calls regarding industrial SW
  - Additional comments
- Guidance Development

  Lunch
- Standard Operating Procedures
- Meeting Summary
- Next Step(s)

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Objective

- ***To establish guidance and procedures for implementing PCB point source monitoring through the VPDES permit program for development of TMDLs.***

  To meet this objective it is essential to collect quality data while reducing uncertainty and minimizing potential contamination. Monitoring will be on a congener basis and includes load characterization under varying hydrology (base and high flow events).

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Clarification

- ***Monitoring requirements only for those facilities discharging to PCB impaired waters.***
- ***Municipal and industrial VPDES permits***

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

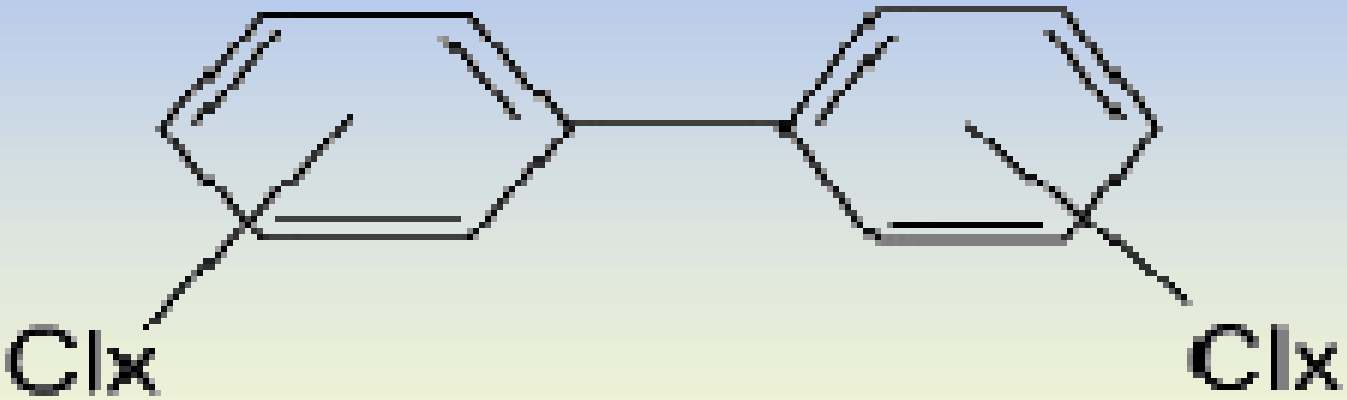
PCB Strategy

Lists 37 advisories divided into -

TMDL development groups:

- **near-term (TMDLs due by 2007)**
- **mid-term (TMDLs due by 2009) and**
- **long term (TMDLs due by 2011 through 2014 depending on priority)**

Response to Comments
Data Issues/Concerns



Arthur Butt

VADEQ

January 8, 2008

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Response to Comments Received

- ***VMA (Hunton&Williams) – July 17, 2007***
- ***Dominion – July 20, 2007***
- ***VAMWA - July 23, 2007***

- Additional comments in December, 2007

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

VMA

July 17, 2007

1. Clarification of purpose
   - Compliance vs information
2. Industrial Facilities
   - Municipal vs industrial
3. Credit (gross/net)
4. Flexibility of time/frequency
   - case-by-case
5. SOP
6. Storm water sampling
   - exemptions

VMA

July 17, 2007

1. **Clarification of purpose**

   VMA recommended that the data generated as part of this monitoring program using Meth1668A should be used solely for TMDL development purposes and any reference to permit development should be deleted. In addition, this guidance should be more narrowly focused on the technical aspects of how and when samples will be collected and analyzed as well as the types of facilities subject to the monitoring requirements.

Response:

DEQ staff agrees - changes made

VMA

July 17, 2007

2. Industrial Facilities

Recommend DEQ distinguish the requirements to both industrial and municipal facilities in sections IV.A and C. VMA also urges DEQ to clarify which types of industrial facilities will be subject to monitoring requirements and suggest an exemption process should be incorporated into the guidance. Particularly if a facility can document that it has no PCBs in its raw materials, transformers or other equipment on site (past or present). In addition, wastewater from some industrial processes is not influenced by wet weather conditions. Accordingly, the frequency and number of samples should be determined on a case-by-case basis for industrial facilities.

Response: Clarification made by holding two conference calls. The best way to demonstrate a facility is not the source of PCB contamination is through monitoring. Exemptions are specified in 9 VAC 25-151-70.

VMA

July 17, 2007

3. **Credit for Intake (net/gross)** VMA believes industrial facilities should not be penalized for the presence of PCBs in their intake water and referenced the Great Lakes Initiative (**40 CFR 132**) be incorporated.

Response:

The guidance is intended for monitoring discharge; not requiring intake monitoring. The Great Lakes Initiative considers intake pollutants … only in the absence of a TMDL (Appendix F, Sections D and E) and such consideration would be in conjunction with the TMDL implementation. Intake data should be in accordance with the Guidance Document.

VMA

July 17, 2007

4. **Flexibility time/frequency**

   Industrial facilities are extremely diverse in their site conditions and activities and recommends language be included in the guidance document be determined on a case-by-case basis, taking into consideration site-specific considerations. VMA also questions the need for verification samples under certain conditions.

Response:

The monitoring requirements are for data generation with a second round of sampling only if any single reported value is below the water quality criterion (WQC) but above half the WQC. Need to confirm that the WQC is not being exceeded.

VMA

July 17, 2007

5. SOP

   It will be very difficult to approve of or apply the monitoring requirements in the guidance without knowing the specific SOPs that will govern such monitoring.

Response:

We acknowledge this limitation and the SOPs were sent to TAC members.

VMA

July 17, 2007

6. Storm water sampling

   Want to learn more about PCB monitoring at storm water outfalls and recommends monitoring should not be required at every storm water outfall if one is representative. In addition, if a facility is unlikely to be a source of PCBs, the exemption should extend to storm water sampling as well.

Response:

Clarification was made through two TAC conference calls (July 25 & Aug 10). Guidance now includes special conditions/exemptions in accordance with **9VAC 25-151-70**.

Dominion

July 20, 2007

1. Application
    1. Exemption
    2. Flexibility
2. Methodology
    1. J-Value
    2. SOP
3. Sampling
    1. Intake (net/gross)
    2. Representative samples

Dominion

July 20, 2007

1. Application
    1. Exemption
    2. Flexibility

Response:

Exemptions are based on the storm water discharge permitting for industrial activities (**9 VAC 25-151-70**). This was discussed during TAC conference calls (July 25 and Aug 10). The guidance is intended to provide a general approach for monitoring requirements with flexibility including sampling time and frequency.

Dominion

July 20, 2007

2. Methodology

- J-Value
- SOP

Response:

DEQ agrees with the use of “J” value and assigning a value of “0” for those below the detection levels. DEQ has incorporated sampling protocols developed for the Delaware and Potomac Rivers with some modification to allow for diverse situations. The SOPs were sent to TAC members prior to this meeting.

Dominion

July 20, 2007

3. Sampling

- Intake (net/gross)
- Representative samples

Response:

PS monitoring to PCB impaired waters is intended for TMDL development as part of data generation and source assessments. It is not intended for permit compliance purposes. Therefore, the guidance is not requiring facilities to sample or monitor intake water. However, if a facility chooses to monitor intake waters, data generation should be in accordance with the Guidance Document.

Representative samples will be considered as discussed during the TAC conference calls of July 25 and Aug 10 and will include special conditions/exemptions regarding multiple outfalls as defined in **9VAC 25-151-70**.

VAMWA

July 23, 2007

1. Status of Method 1668A
    1. no validation study
2. Limitations of Method
    1. QLs - 50 and 1000 pg/l by congener
    2. Laboratory demonstration
3. Providing Authority
    1. Duty to provide for existing information
4. EPA needs to develop a method
    1. Validation study
    2. Qualitative use of Method 1668A
    3. Net/Gross

VAMWA

July 23, 2007

1. Status of Method 1668A
    1. no validation study

Response:

EPA has conducted a six lab inter-laboratory validation study of method 1668A in wastewater and fish tissue matrices. The results of the study are favorable enough to consider proposing Method 1668A for inclusion in 40CFR Part 136. However, it is EPA policy to peer review validation study before deciding whether to conduct a rulemaking. The peer review is scheduled to be completed after which EPA will review the comments received and decide on a course of action.

VAMWA

July 23, 2007

2. Limitations of Method

- QLs - 50 and 1000 pg/l by congener

Response:

Method 1668A is performance based. The detection limits and quantification levels in this Method are determined by the laboratories and are usually dependent on the level of interferences and laboratory background levels rather than instrumental limitations. As defined and implemented through the VPDES program, the quantification level (QL) is the lowest concentration used for the calibration of a measurement system. As noted for the Potomac PCB TMDL study, the lowest calibration level was sample dependant and ranged from 8-11 pg/L on a congener basis.

VAMWA

July 23, 2007

3. Providing Authority

VAMWA views 9 VAC 25-31-190.H as authorizing requests for existing information, and not for the generation of new data.

Response:

Virginia's administrative code **9VAC 25-31-190.H** does not specify the type of data, but is clear in its intent to "...*require the permittee to furnish, upon request,… pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters…"* A request of information has been delegated to the Director and program managers (**9 VAC 25-31-200).**

VAMWA

July 23, 2007

4. EPA needs to develop a method
   I. Validation study
   II. Qualitative use of Method 1668A
   III. Net/Gross

Response:

Items I and II were addressed under Comments 1 & 2. The guidance is not requiring intake monitoring. Consideration of additional data would be in conjunction with TMDL implementation or VPDES permits, but not part of the assessment. If a facility monitors their intake water, such data should be in accordance with the Guidance Document.

Subsequent comments received December 2007

- Bob Steidel, City of Richmond
- Andrea W. Wortzel, Hunton & Williams
- Dick Sedgley, AquaLaw

Bob Steidel

Dec 18, 2007

- Are you aware that DCR is adopting sampling procedures for TMDL in the MS4 regulation? As I read them DCR procedures are counter to your guidance.

Draft Proposed Municipal Separate Storm Sewer System (MS4) General Permit Regulations

September 19, 2007

a. The operator shall collect a total of two samples from a representative outfall for each identified municipal property during each of the following six-month periods: October through March, and April through September.

b. All collected samples shall be grab samples and collected within the first thirty minutes of a runoff producing event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previous measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the property.

General Permits
Storm Water Monitoring

Industrial SW

DEQ – 7/1/04

- Grab sample
- Min of one
- First 30 min
- At least 0.1” precip
- 72 hour interval
- Representative outfalls

MS4

DCR – 9/19/07

- Grab samples
- 2 samples
- First 30 min
- > 0.1” precip
- 72 hour interval
- Representative outfalls

Andrea Wortzel

Dec 20, 2007

- Clarification on the process for the regulated community to comment further and our process for wrapping up the document…
- General problem with background info that they (VMA) don't typically see in DEQ guidance…
- Specifically mentioned the "point source" definition.
- Concerned that we may have some conflicts with definitions of the similar terms in various regs and questioned whether all the background type info belongs in the guidance memo or a cover memo.

Dick Sedgley

- Guidance Appendix A the statement that "1668A has been proposed for adoption into part 136" is incorrect. It hasn't been. This seems to continue a series of mistaken observations about 1668A.
- SETAC presentation calculates tPCB Quantitation Limits well above those that some labs have claimed, and more consistent with the QLs that the Method itself anticipates. Method, at best, is suitable for qualitative use in the range of the water quality standards.
- Response to Comments document cites Va Code 62.1-44.19:5.B. That section appears to instruct DEQ as to monitoring, rather than providing extra-permit authority to require it of others.

VAMWA

July 23, 2007

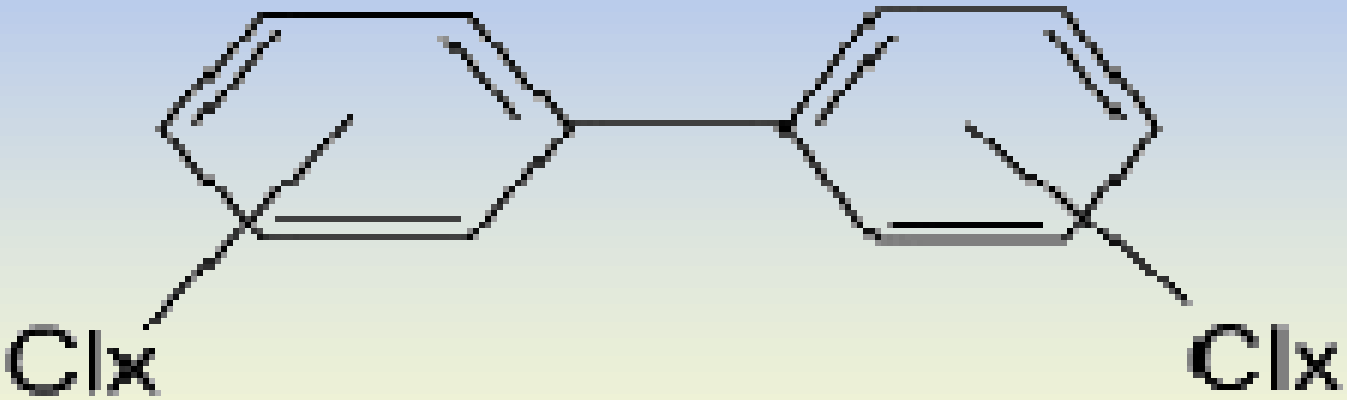
3. Providing Authority

Response: WQMIRA (1996), pursuant to §62.1-44.19.5.B, authorizes monitoring in order to conduct source assessments.

Dick is correct - That section appears to instruct DEQ as to monitoring, rather than providing extra-permit authority to require it of others.

PCB TMDL Monitoring Guidance

Industrial Discharges



Arthur Butt

VADEQ

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Conference Calls

- To discuss various concerns (exemptions, representative sampling, wet vs dry)
  - **July 25th**
  - **August 10th**
- Minutes distributed and suggestions /clarifications included in the draft Guidance Document or SOPs.

Stormwater

Permits

Phase One

1. Industrial activities (including construction [A,C] and surface coal mining [B])
2. Individual municipal (large and medium) w/ separate MS4 [C]
3. Construction activity [C] (land disturbance > 5 acres)

Phase Two

1. Construction activity (land disturbances < 5 acres) [C]
2. Small MS4 [C]

A - DEQ
B - DMME
C - DCR

Stormwater

Permits

Phase One

1. **Industrial activities** [A,]
2. [C] and surface coal mining [B])
3. Individual municipal (large and medium) w/ separate MS4 [C]
4. Construction activity [C] (land disturbance > 5 acres)

Phase Two

1. Construction activity (land disturbances < 5 acres) [C]
2. Small MS4 [C]

A - DEQ

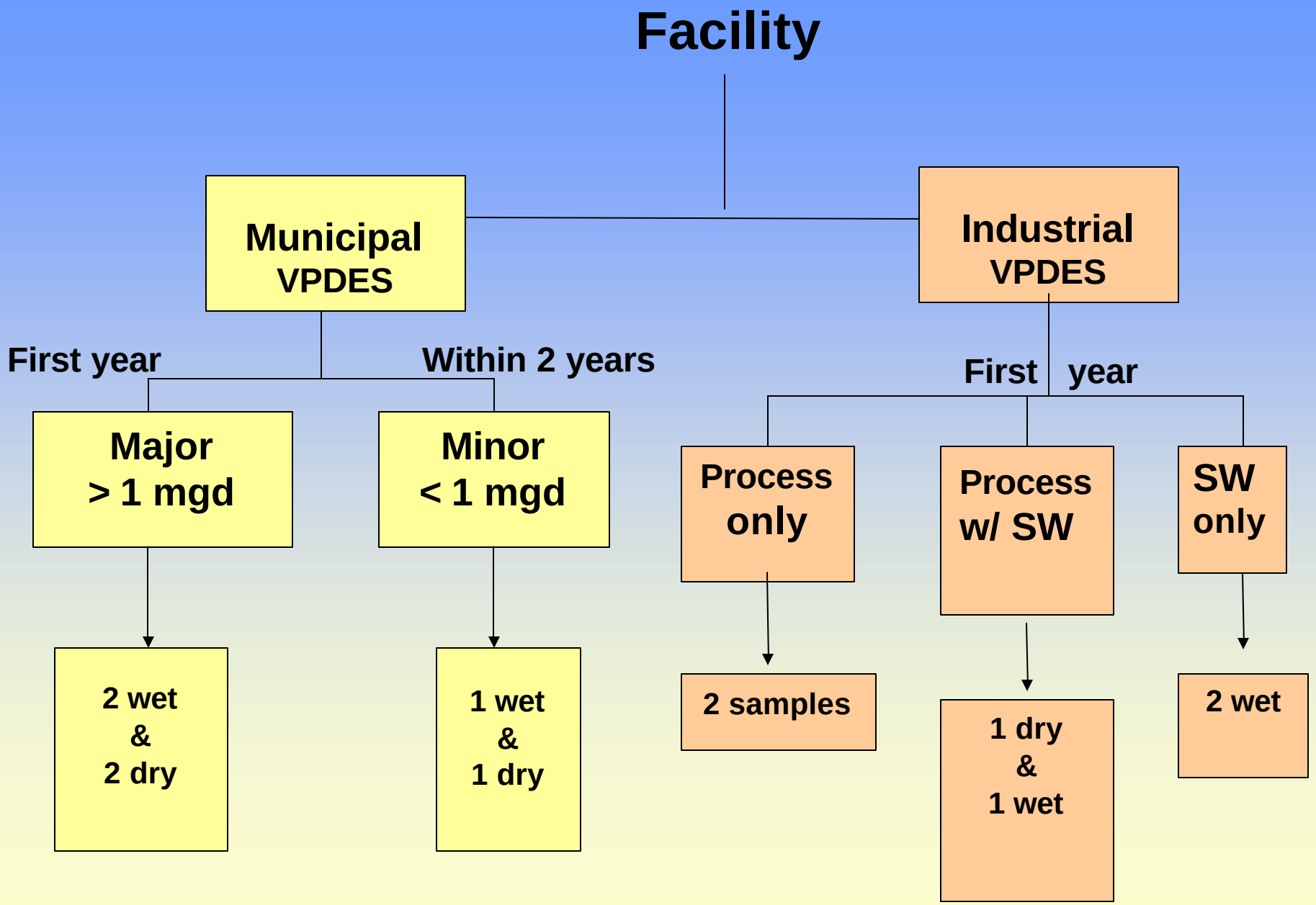
B - DMME

C - DCR

Probable sources of PCBs
- industrial / commercial -

SIC Code	Code Name Facility
26 & 27	Paper and Allied Products/Printing
30	Rubber and Misc. Plastics
33	Primary Metal Industries
34	Fabricated Metal Products
37	Transportation Equipment
49	Electrical, Gas and Sanitary Services
5093	Scrap Recycling
1221 & 1222	Bituminous Coal

Source: Belton et al. 2005


Facility
Municipal VPDES
Industrial VPDES
First year
Within 2 years
First year
Major > 1 mgd
Minor < 1 mgd
Process only
Process w/ SW
SW only
2 wet & 2 dry
1 wet & 1 dry
2 samples
1 dry & 1 wet
2 wet

Projected Costs

- Laboratories
- Sample Collection (composite vs grab)
  - Clean technique (cost ?)
- Method 1668A Cost
  - $700 – $1,200 per sample
  - Greater number of samples < $$
  - Additional analysis with composite
- SPMD (estimated)
  - $450-$500 per SPMD
    - Includes clean-up and extraction
  - Plus Cost of Analysis